

Remarks by  
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John, thank you for that kind introduction. Once again, congratulations to all the award winners, and thank you for all your important contributions to our national security. This annual event is an impressive gathering of leaders from every key sector of our maritime forces, and I am honored to be here.

We are gathered at a time of war, and at a time when we must prepare today for the wars of the future. In the face of these dual challenges, the Department of the Navy's top three priorities should be self-evident. One, support combat operations in Iraq and Afghanistan. Two, take care of our wounded heroes. And three, transform the fleet for the future.

Given the audience in this symposium, today I would like take this opportunity to share my thoughts with you, after a year into my service as Secretary, on that third priority, particularly as it relates to shipbuilding. Shipbuilding is a matter of personal focus for me, and I am encouraged to see that Dr. Etter and her team in RDA are showing admirable energy and enthusiasm in addressing shipbuilding issues.

There are two basic reasons why shipbuilding commands so much of our attention. First, our Navy and Marine Corps necessarily revolves around our fleet—300 or so capital assets that define the global reach and awesome striking power that define the United States Navy-Marine Corps team. Second, our current shipbuilding program is simply not meeting our expectations. We must do better. The need to do better is especially urgent, for today's security environment requires that we modernize and re-capitalize the fleet across the full range of our capabilities.

Although we have the best Navy in the world today, no one in this room can deny that, without improvements, we will not be able to evolve, build, and sustain the fleet we need for the future. By evolve, I mean that we must transform; by build I mean that we must have an adequate fleet size; and by sustain, I mean that we must maintain a high state of readiness at all times.

These imperatives add up to a point that is worth emphasizing: the national security of the United States depends on our ability to meet our presence and surge requirements. So we must build and maintain a fleet that meets these objectives.

But acquisition challenges continue to hamper our efforts. In many aspects, the problems we are experiencing with shipbuilding mirror the challenges seen elsewhere in the Department of Defense. These problems are longstanding, evident to all who study them, and seemingly resistant to the many efforts that have been made to overcome them. This must change. And for my remaining time as Secretary, I will be intensely focused on fixing the problems and improving our acquisition processes.

The first step is a clear and candid analysis of the problems that ail us. Here are five of the Department of the Navy's most critical challenges in the shipbuilding program, as I see them:

First, there has been a steady erosion in domain knowledge within the Department of the Navy over the past several decades, resulting in an over-reliance on contractors in the performance of core in-house functions. From the Navy's point of view, that over-reliance has not been beneficial. I would also argue that, in the long run, this situation is not beneficial to the shipbuilding industry either.

While the Department's level of technical expertise associated with naval architecture and design is relatively high, our knowledge of the shipbuilding process is short of what it has been in the past, and what it needs to be in the future. Our challenge is to understand how to integrate design and production technology into an acquisition process that industry can execute.

This requires a deep knowledge of systems engineering and a profound understanding of the acquisition process. Systems engineering is key to ensuring that each ship is configured to optimize the fleet. The Navy does not fight a ship by itself. It wages war as part of an Expeditionary Strike Group or a Carrier Strike Group. And those strike group formations are part of even larger Joint operations. All this implies a need for integration of elements and capabilities.

The decisions regarding what we really need in a ship—a ship that fights alongside many other platforms—are inherently decisions that properly belong to the Navy. Only when we improve domain knowledge and re-assert greater control over the acquisition process will we be in a position to make better overall program decisions.

Second, there is a limited understanding within the Department of Defense of how business operates, how it responds to competition, and how it is affected by Wall Street's expectations. The reasons for this limited understanding are not difficult to discover.

Interestingly, industry does understand the Department of the Navy. Industry hires our alumni, and runs an extensive and effective intelligence collection effort targeting us. But the Department's acquisition program managers do not have an in-depth understanding of how industry operates, and the Department as a whole does not act strategically in dealing with industry. It is very difficult for government to hire from industry, particularly at the more senior levels. Furthermore, we do not provide the experiences or training to our uniformed acquisition professionals that would enable them to fully understand or anticipate industry. Neither government nor business can effectively operate with this gap in the government's ability to understand business.

Third, the shipbuilding market is such that the Navy has little ability to reap the benefits of competition. In many cases, the competition consists of only two companies, and sometimes even then there are limits on the degree of competition between them. The consolidation of the shipbuilding industry has reduced competition even further, to the point that there is no competition for many major systems that we purchase.

Under normal market conditions, competition drives innovation and investment, and without intense competitive pressures, both will inevitably suffer. As a result of the lack of

competition in shipbuilding, competitive factors rarely drive us towards optimal solutions, or adequate investment levels.

Fourth, there have been unrealistic expectations of the potential for commercial solutions to our often complex and unique Naval requirements. By commercial solutions I mean, primarily, the use of commercial design and production techniques in building warships. Clearly, there is much to be learned from commercial production activities. That is evident in overseas yards that build commercial and military ships, as well as in yards solely dedicated to military production.

However, the advantages of commercial cross-pollination do not equally apply to warship *designs*. We may find good ideas that can be adapted to our needs, but the conversion of a commercial design to one that can be applied to warships is most often a non-trivial exercise. This is probably a good thing, because if it were a simple matter, many countries could build the most advanced warships by converting their commercial capabilities into military systems. The fact is, commercial solutions cannot satisfy the majority of our requirements, and the majority of our warships will necessarily be produced in shipyards dedicated to Navy programs.

Our fifth and final challenge is our fear of recognizing the true expected costs of acquisition programs upfront. The government and contractors routinely under-estimate costs, often due to over-optimism in the early stages of program conceptualization. I share Congress' frustration with DoD's poor record with respect to cost estimates and budgeting.

There is a fear that a given program will not be approved if realistic cost assumptions are made during the program approval and contract negotiation phases. While setting reasonably aggressive cost targets may be a standard management technique, setting targets that are unachievable harms our credibility, creates distrust between Congress and the Navy, and destabilizes future budgets as cost overruns come home to roost.

Optimism is part of the American military ethos. It is also characteristic of visionary business leaders. But over-optimism does not serve us well. The pressure to get the camel's nose under the tent, so to speak, sometimes leads to shortcuts in design, resulting in cost problems down the road. But if the thinking is that we simply must get the program started and we will deal with cost growth later, then the Department will continue to suffer from a chronic case of over-optimism. The end result is a tendency to allow over-optimistic cost projections at the beginning, leading to excessive cost growth over the long term.

What then, must we do to begin to address these issues? Here are six steps that must be taken.

First, the Navy must re-assert its control over the entire shipbuilding acquisition process. The Navy owns the fleet, and the Navy is the customer. Sometimes one has the impression that this tiny distinction has been forgotten.

Control over the process means that the Navy must make the selections of key trade-offs—performance, crew size, logistics support, cost, and schedule. Ships do not have much value without the crews that operate them, and if our decisions are not driven by taking into account how each parameter fits into the big picture, we will make unwise decisions.

Added to that consideration is the fact that ships do not operate in isolation -- they operate with shore and air components. These other factors are highly relevant, so it is very important that the Navy take all factors into consideration and exercise control over the decision process.

Control over acquisitions also means that we need to “decouple” decision points. The limited nature of the competition that exists in shipbuilding often produces only two alternatives to choose between—a package A and a package B. But within each package is a massive set of options—options that entail many trade-offs. We might benefit from some elements of package A, and some elements of package B. We need to decide which trade-offs make the most sense from the Navy’s point of view.

It is essential that we be able to separate out these three elements:

- what we want to buy,
- how we want to buy it,
- and who we want to buy it from.

Second step - the Navy must define the design constraints to optimize the overall capability of the Fleet. The lead systems integrator should be the Navy—not the contractor.

When the Navy is relegated to the role of advisor on technical and systems integration matters, the responsibility for the decision-making process is, in effect, contracted out to others. But it is the Navy’s responsibility to optimize the fleet’s capabilities. Such optimization might include common standards; preferred components and subsystems; mission modularity; and open architecture. It all depends on what would be most advantageous to the Navy. This cannot be left to individual system contractors because only the Navy is in a position to assess a program’s impact on overall fleet optimization.

Third step - contractors must design for production and sustainment. Every time the Navy decides to build a new platform, it should be viewed as an opportunity to re-evaluate our production processes.

Instead, we typically acquiesce to the natural desire of industry to use existing approaches, and leverage as many existing facilities as possible. Significant improvements in technology and efficiency can be achieved if industry is willing to re-think its production processes when new platforms are being brought online.

The government has a strong interest in getting industry to take advantage of those opportunities to re-design their production lines. The Navy, therefore, must structure its contracts so that industry is motivated to do that. Without the right incentives, the investments in production facilities the Navy needs will not take place, and we will be left with outmoded and inefficient production lines.

Four, the Navy needs to use independent cost estimates for the trade-offs and decisions that we make. Restoring credibility requires that we do a far better job of projecting costs. Under the conventional bidding process, the lowest credible cost estimate often wins the contract. The result may be far different from selecting the most probable cost estimate. We must move away from the culture of over-optimism in our estimates, and more towards more independent, accurate cost projections at every step of the way.

Five, detail design and construction contracts must be supported by mature specifications. We should understand what we are building in enough detail to use fixed price incentive contracts for all but lead ships. Yes, there are programs with high development content, with new technologies and significant design uncertainties. In such cases, it is difficult to project costs and manage the inherent difficulties associated with such programs using fixed price approaches. Such programs require more flexible contracting alternatives. And yet, even then we should look to how we can transition to a fixed price structure as soon as the design matures.

Finally, the Navy needs to provide knowledgeable program oversight. Hiring top quality people who have experience with large shipbuilding programs is essential. The ability to assign an experienced and capable team must be a pre-condition to a program's initiation. Finding and developing the people we need is easier said than done, and it will take time to rectify this problem, but we can not ignore the leverage that can be obtained by putting the right, experienced and prepared people, in the right positions.

This leads me to a final question regarding what needs to be done to fix the problems we are now experiencing: What do I expect from the contractors?

If a company chooses to participate in the shipbuilding industry that supports our Navy, corporate leaders need to approach shipbuilding as an integral part of their business. The shipbuilding market is a long-term, dependable opportunity that merits a long-term business perspective.

Consider the degree of predictability that is characteristic of the shipbuilding industry—how often does a customer lay out his entire acquisition structure for the next 30 years? Furthermore, there are huge barriers to entry, and once a firm has entered the market, it benefits from those advantages. Contrast these conditions with those that exist in the IT or service industry, where start-ups take away business from established companies every day. The shipbuilding industry is a potentially rewarding environment for those who have made the appropriate investments.

That said, significant new investments are needed in capital plants, people, and processes. The current level of investment in our shipyards is nowhere near adequate to meet our needs today, nor is it sufficient to bring American facilities up to the world class standards that are evident in a number of European and Asian shipyards. But we believe that a valid business case can and must be made for investment in this sector of the economy, and we have seen examples of its viability abroad.

The Navy can and will provide adequate profitability to performing contractors. We are now negotiating contracts with greater than 15 percent target profits. I have no hesitation in saying that substantially higher profitability rates are perfectly acceptable, and I am not opposed

to them, especially if accompanied by greater investments in facility modernization, and workforce training and development.

In laying out my assessment of the situation in the Navy's shipbuilding program, and what will be required to improve it, it is not my intention to be unduly harsh. I realize that some in industry and in the Navy may find my message to be disturbing, and may even take umbrage at my candor. But I hope that you will recognize this as a genuine case of tough love.

I really do believe that we—in government and industry—must make some fundamental changes in the way we do business in the shipbuilding domain. If we do not figure out how to establish credibility in our shipbuilding programs and plans, and restore confidence in our ability to deliver on our commitments, we cannot expect Congress or the nation to provide us with the resources we so urgently need.

Thank you.